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16 UNITED STATES DISTRICT COURT
17 NORTHERN DISTRICT OF CALIFORNIA
18 SAN FRANCISCO DIVISION

19 WAYMO LLC,
20 Plaintiff,
21 v.
22 UBER TECHNOLOGIES, INC.,
23 OTTOMOTTO LLC; OTTO TRUCKING LLC,
24 Defendants.

Case No. 3:17-cv-00939-WHA

**DECLARATION OF KEVIN
FAULKNER IN SUPPORT OF
DEFENDANTS' OPPOSITION TO
PLAINTIFF WAYMO LLC'S
MOTION FOR PRELIMINARY
INJUNCTION**

Date: May 3, 2017
Time: 7:30 a.m.
Ctrm: 8, 19th Floor
Judge: The Honorable William Alsup

Trial Date: October 2, 2017

UNREDACTED VERSION OF DOCUMENT SUBMITTED UNDER SEAL

1 I, Kevin Faulkner, declare as follows:

2 1. I am a Managing Director and head of the New York digital forensics lab at Stroz
3 Friedberg, a specialized risk management firm with expertise in digital forensics, security science
4 and investigations. I co-manage the firm's technical operations in areas of digital forensics and
5 incident response. I supervise and perform digital forensic acquisitions and examinations on
6 laptop and desktop computers, e-mail and file servers, handheld/mobile devices, backup tapes and
7 network logs in civil and criminal cases, internal investigations, and cybercrime engagements. I
8 make this declaration in support of Uber's opposition to plaintiff's motion for preliminary
9 injunction. I make this declaration based on personal knowledge and, if called as a witness, I
10 would testify to the facts listed below.

11 2. I have over 13 years of experience in digital forensics and incident response, and
12 over 18 years of experience in technology. I have attained a number of certifications in digital
13 forensics, computer security, and information technology including:

- 14 • EnCase Certified Examiner (EnCE)
- 15 • Certified Computer Examiner (CCE)
- 16 • GIAC Certified Forensic Examiner (GCFE)
- 17 • PCI Qualified Security Assessor (QSA)
- 18 • CompTIA Linux+
- Microsoft Certified Professional

19 I am a member of the International Society of Forensic Computer Examiners and The Sedona
20 Conference Working Groups on Electronic Document Retention and Production, and Data
21 Security and Privacy Liability. I have testified, submitted affidavits, declarations, witness
22 statements and/or expert reports in my capacity as a digital forensic expert approximately
23 30 times in the following courts:

- 24 • The United States District Court for the Eastern District of New York
- 25 • The United States District Court for the Southern District of New York
- 26 • The United States District Court for the District of New Jersey
- 27 • The United States District Court for the District of Massachusetts
- 28 • The United States District Court for the District of Maryland
- The United States District Court for the Northern District of Georgia

- The United States District Court for the Eastern District of Texas
- The United States District Court for the District of Nevada
- The United States District Court for the District of Arizona
- New Jersey Superior Court, Law Division
- Court of Chancery of the State of Delaware

3. On or around March 15, 2017, Stroz Friedberg was hired to investigate whether any Waymo confidential material was placed on the computer systems of defendants Uber Technologies, Inc., Ottomotto LLC and Otto Trucking LLC's (collectively, "Uber").

4. Though our investigation is ongoing, to date, Stroz Friedberg has imaged the workstations of 87 employees, which I understand constitutes all former Google employees who are now at Uber. We also worked with Uber to preserve and collect data from the company's G Suite applications, including Gmail email and Google Drive file server storage. Uber primarily uses Google Drive to provide its employees with cloud-based server storage in lieu of traditional on premise file servers. As of the date of this declaration, we have collected a total of approximately 106.5 terabytes of data.

5. It was not possible to search the entirety of this tremendous volume of data before March 31. Thus, we examined data from the three custodians named in Waymo's preliminary injunction papers (Anthony Levandowski, Sameer Kshirsagar and Radu Raduta), as well as seven additional former Google employees who worked on Chauffeur or LiDAR at Google (Asheem Linaval, Daniel Gruver, George Lagui, Jur van den Berg, Michael Tocce, Nikko Alcantara, and Rudy Seville). In addition, we searched Uber's Git version control system software repositories and Mr. Kshirsagar's personal phone and email.

6. We searched these devices and accounts for the 14,107 Waymo SVN filenames identified by Waymo as allegedly having been downloaded (referred to herein as the "Waymo SVN Files"). We also searched for the filenames of documents included in Waymo's preliminary injunction papers. We also searched for a set of search terms derived from Waymo's preliminary injunction papers that were likely to identify Google confidential information. Finally, we used

MD5 hash values to search for files on Uber's systems that were identical to the Waymo SVN Files.¹

7. This extensive search of the data for the ten custodians and the Git repository identified a total of 5,473 files, none of which were located in the Git repository. We identified the overwhelming majority of these files (5,277) on the computers used by Uber hardware engineer Asheem Linaval. Of the 5,473 identified files, there are 2,940 unique files, 30 of which are MD5 hash matches with the Waymo SVN Files. We also identified two documents in Sameer Kshirsagar's personal Gmail: an Excel spreadsheet entitled "NPI Ramp Checklist," which Mr. Kshirsagar emailed from his google.com email to his Gmail on June 13, 2016, and a PDF entitled "All things RX Part 2- [REDACTED]," which Mr. Kshirsagar emailed from his google.com email to his Gmail on June 14, 2016.

8. To further eliminate "false positives" from these search results, Stroz Friedberg worked with Uber to install the electrical engineering design applications Altium and LTSpice on a clean, previously unused Microsoft Windows virtual machine (referred to herein as the "Test System"). Asheem Linaval then used the Test System to create simple mock-up Altium design files and my team subsequently created file metadata and hash listings of the contents. We then compared the hash values of the design application files and mock-up design files from the Test System against the responsive dataset. Stroz Friedberg found that all but 12 of the 30 unique Waymo SVN hash results matched the contents of the virtual machine by MD5 hash. In other words, there were only 12 unique files that did not match the contents of the Test System by hash value. These 12 files are listed in the following table:

#	Representative File Name	Sources	Hash
1	attrlist-originalottodata_OB2LGXS2Qe7kYbldzUzdVUFRWDg	Google Drive, A. Linaval	02F218BD64549CE6A2CB7DCABC37E037
2	jdsu_rx.PRJPCBSTRUCTURE	A. Linaval	1CC6FBFA75C31A8969DB237CF744D9B3
3	receiver-1-2-0.PRJPCBSTRUCTURE	A. Linaval	1CF14870AE2754115C6158C7A66369BF
4	805dcbe7c0e2ab799e118c189cc4fd15cba762e0.svn-base	A. Linaval	32D89BDD6407047C8F65F7CD1DF30EE2
5	attrlist-originalottodata_OB2LGXS2Qe7kYZ3l0cDh6S0VZbmc	Google Drive, A. Linaval	6A7702DDE1BD72C5F77AD8F1BC707076
6	attrlist_OB1YlyvARWQ82S2pCVnhiUDIta0E	Google Drive,	CAFE8C6A4514C13674F78C876D266E63

¹ A hash value is a cryptographic value that can be calculated for a file. Hash values are commonly used in digital forensics as "digital fingerprints" to establish the identity and/or integrity of digital media.

#	Representative File Name	Sources	Hash
7	attrlist-originalottodata_OB2LGXS2Qe7kYWEtTaW96WIRNZWs	A. Linaval Google Drive,	D23945490C03E1AE6CA646750C69F267
8	PCB_Project_OBwLeHzZBkM1wdGF5NFhBSXUwTTQ.PRJPCBSTRUCTURE	A. Linaval Google Drive	DBC80CD246C8CFD885C5EF4C495F2BB4
9	e2d944e9d3a0b051b292272857b81973c51ae8b4.svn-base	A. Linaval	E50C925CA2FA77585CD48200E482B36F
10	e3de6e50df88111d206b5a696ab3bc96c038f688.svn-base	A. Linaval	FDB4E0A667677EEC7A166946B83129C8
11	attrlist	A. Linaval	215C766CBBF7B55C968C16F74C38066A
12	tools	G. Lagui, A. Linaval	374930C82AF79D6EB0ABD62EAFD83454

9. This exercise demonstrates that the Waymo SVN Files include numerous commonly used file names and numerous duplicative files. For these reasons, it is clear that the full set of Waymo SVN Files should not be used for the identification of potential Waymo proprietary content.

10. I understand that Waymo's counsel subsequently identified a subset of 50 of the Waymo SVN Files as priority files. For the ten Uber employees whose devices and accounts Stroz Friedberg has searched to date, we have identified no hash matches with these priority files and 21 unique files that match by file name. These files were all on computers used by Asheem Linaval and all have one of the following five file names; amp.SCHDOC, apd.SCHDOC, laser.SCHDOC, receiver.PCBDOC, and receiver.SCHDOC.

11. Stroz Friedberg's investigation is ongoing, and has not yet been completed. Accordingly, I respectfully reserve the right to revise, expand, or supplement my opinions in subsequent reports and prior to trial.

I declare under the penalty of perjury under the laws of the United States of America that the foregoing is true and correct. Executed this 7th day of April, 2017, in Paris, France.



Kevin Faulkner